MML TM 93-22

COLLOCATED TUNABLE WAVENUMBER SENSOR/ACTUATORS FOR SMART STRUCTURES

N00014-92-C-0214

CDRL A001.11

Covering the period: 1 August to 31 August 1993

Submitted to:

Office of Naval Research
Scientific Officer
Code : 1221

Submitted by:

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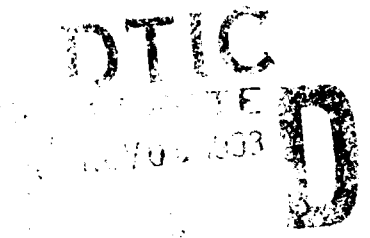
September 1, 1993



Contract progress and activities since CDRL A001.10.

Summary of progress

- Release of remaining contract funds approved as of 23 July 1993.
- New tasks, as listed in the 28 April rescheduling option, are planned following the attached schedule.
- One green actuator module was prepared and is currently in burn out -- for this first iteration the burn-out schedule will be:
  - 5°C/hour to 500°C
    hold for 5 hours at 500°C
    cool at 50°C/hour to room temperature
    3 cfm air flow
- A pad of smaller actuators is currently being prepared so that there will be sufficient samples for mechanical testing next month.

Telephone calls, trips, and significant results

- Dr. Keith Bridger and Alex Bailey attended the ONR Working Group Review on 13 July, with Mr. Bailey presenting.

Results bearing on prior problem areas

- No prior problem areas.

Programmatic changes

- Dr. Keith Bridger assumed the position of Program Manager effective 1 August 1993.
- Program schedule is as shown on the attached page.

Technical or scheduling problem areas

- None -- this program is off to a flying start.

Contract and cost schedule status

- Expended funds as of 29 August1993, including expenditures prior to 23 July, were $113K against a current budget of $119K.
- A revised cost schedule, reflecting the 23 July program restart, is attached.

Plans for September 1993

- Mechanical measurements will be made on the first set of small actuators.
- The first full-size actuator will be examined for defects and the next iteration begun.
- Electromechanical modelling on the actuators will be conducted to verify the design and initial measurements will begin -- assuming the first full-size actuator is sound.
- Note that this progress and plan represents an acceleration of the original program plan.

Preparers

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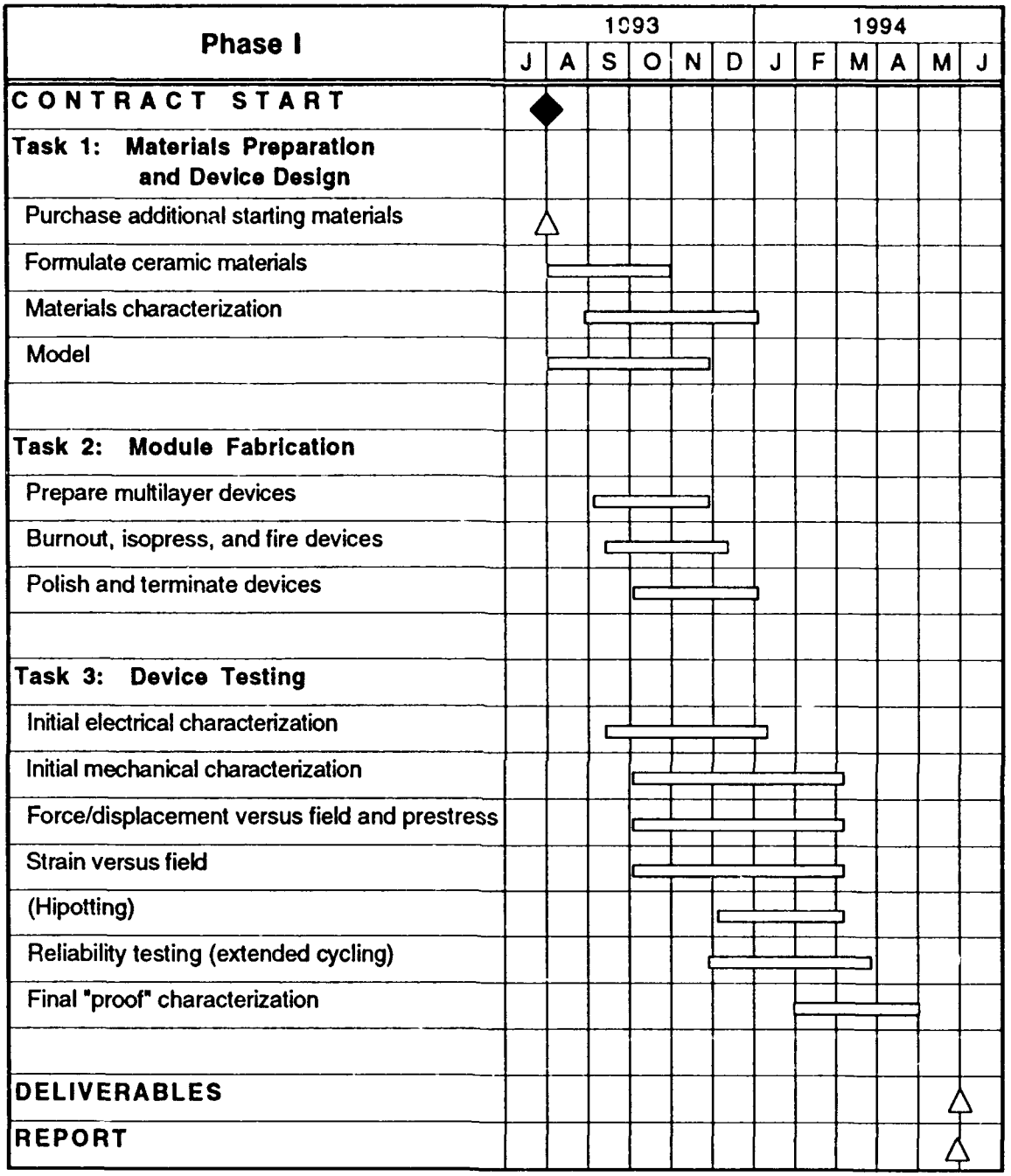
SCHEDULE, MILESTONES, AND DELIVERABLES



EXPENDITURE CHART

3117-000 ONR
Co-Fired High-Force Actuators